

# THE MEDICINAL AND POISONOUS LINDENBLOOMS OF INDIA.

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The TILIACEÆ are trees or shrubs, rarely herbs. Most of them are tropical; a few inhabit the temperate northern hemisphere, and some are found behind the tropic of Capricorn; but none extend into the Arctic Circle, or ascend to great mountain elevations. The 380 species are distributed into 35 genera.

In general the leaves are mucilaginous and emollient; the bracts and flowers are aromatic, antispasmodic, and slightly sudorific. The bark may be bitter and astringent.

Among the products obtained may be mentioned:— (1) a volatile oil; (2) lævo-rotatory *phytosterols*; (3) *vanillin*; and (4) *glucosides*—capsularin, corchorin, tiliacin—.

The medicinal and poisonous Lindenblossoms of the world belong to 12 genera: ANCISTROCARPUS (tropical West Africa); CISTANTHERA (tropical Central and West Africa); CORCHOROPSIS (Japan, China); CORCHORUS (warm regions); ELÆOCARPUS (tropical); GLYPHÆA (tropical Africa); GREWIA (Asia, Africa, Australia; mostly tropical); LUEHEA (tropical America, West Indies); SLOANEA (tropical); SPARMANNIA (tropical and South Africa); TILIA (northern temperate regions); TRIUMFETTA (tropical).

The medicinal and poisonous Lindenblossoms of India belong to 4 genera: CORCHORUS, ELÆOCARPUS, GREWIA, TRIUMFETTA.

## A. Anthers opening by slits.

I. Petals usually foveolate or glandular at the base; stamens springing from the apex of a raised torus.

a. Fruit without prickles ... ... GREWIA.

b. Fruit prickly.

Herbs or undershrubs. Fruit small ... TRIUMFETTA.

II. Petals not foveolate or glandular at the base; stamens

springing from a contracted torus ... ... CORCHORUS.

## B. Anthers opening by a terminal pore.

Petals sepaloid ... ... ELÆOCARPUS.

## CORCHORUS.

The genus consists of 40 species widely dispersed throughout the warm countries of the world.

The following are used medicinally in the Philippine Islands—*C. acutangulus* Lam., *C. capsularis* Linn.—; in Indo-China—*C. capsularis* Linn.—; in Egypt—*C. olitorius* Linn.—; in Gold Coast—*C. acutangulus* Lam.—; in Southern Africa—*C. asplenifolius* Burch., *C. serræfolius* Burch.—.

A. Capsule globose, not beaked ... ... *C. capsularis*.

B. Capsule elongated.

1. Beak 3-fid spreading ... ... *C. acutangulus*.

II. Beak entire.

1. Capsule glabrous, cylindric, 10-ribbed.

Beak long, erect ... .. *C. olitorius*.

2. Capsule scabrous or aculeate, 3-angled.

Beak short, erect ... .. *C. trilocularis*.

C. Capsule short, beak entire.

- I. Annual. Capsule pubescent, 3-valved ... *C. fascicularis*.

- II. Perennial. Capsule glabrous, 4-valved ... *C. depressus*.

1. **Corchorus acutangulus** Lam. is found throughout the hotter parts of India and Ceylon. It is distributed to Australia, tropical Africa, and the West Indies.

The bitter seeds are given by the Mundas of Chota Nagpur in pneumonia and stomach ache.

In Gold Coast the whole plant, including the root, is used in the form of an injection for urethral discharges.

*Akim*: Survabiri—; *Awuna*: Lolui-tsu—; *Bengali*: Titapat—; *Ewe*: Have—; *Ibo*: Aheheara, Ahihira—; *Krepi*: Ademadema, Adomadoma ; *Krobo*: Togatoya—; *Mende*: Ndogbo-ngengele—; *Mundari*: Karigiri, Karijiri, Karijuri, Piritjudiring—; *Tubu*: Koebulu—; *Twi*: Padeedee, Siwabiri—; *Yoruba*: Abojaga, Abo jaja—.

2. **Corchorus capsularis** Linn. occurs throughout the hotter parts of India. It is cultivated in most tropical countries.

A decoction of the dried root and unripe fruit is given in diarrhoea.

In cases of dysentery the dried leaves are eaten at breakfast time with rice. The cold infusion is also administered as a tonic in dysenteric complaints, fever, and dyspepsia.

It is a common practice in the jute-growing districts of Bengal to keep a small stock of the dried jute leaves in the house, whereof an infusion—a so-called tea—is made and taken by those suffering from any disorder of the liver. From the reports received by the Indigenous Drugs Committee it appears that the infusion is used as a popular domestic medicine for disorder of the liver and is of great value when there is a trouble with burning sensation in hands and feet. It is also used as a bitter tonic, stomachic, laxative, carminative, stimulant to increase appetite and flow of saliva and gastric juice; also as an antiperiodic, anthelmintic, astringent and intestinal antiseptic. It has been reported as efficacious in fever, bilious troubles, worms of children, dysentery, hepatic and intestinal colic, gastralgia and gastric catarrh, skin diseases especially itches, atonic dyspepsia, slight jaundice, and in the disorder of the digestive system.

In Indo-China the flowers are given in epistaxis; the fruits are applied to swelling and abscesses, and prescribed in diseases of the bladder.

*Assam*: Marasag, Titamara—; *Bengal*: Ghinalitapat, Koshta, Narcha Titthapat—; *Bombay*: Chouchen, Ghinaltapat, Narcha—; *English*: Jute—; *Formosa*: Ma-p'i—; *French*: Chanvre de Calcutta, Jute—; *Hindi*: Ghinalita, Koshta, Narcha, Pat—; *Indo-China*: Bo day, Floang ma, Ta ma—; *Marathi*: Chaunchan—; *Mundari*: Hatularita—; *Philippines*: Patas, Ponglopongloan—; *Porebunder*: Borachhunchh, Chhunchh—; *Portuguese*: Juta—; *Sadani*: Larita—; *Sanskrit*: Kalasaka, Nadikapatta—; *Santali*: Kaskomrau—;

*Shahjahanpur*: Harrawa—; *Sinhalese*: Jaladara—; *Tagalog*: Pasaonabilog—; *Tamil*: Pirattikirai—; *Visayan*: Lamhay—.

3. **Corchorus depressus** Stocks is found in the Punjab, Sind, Baluchistan, Cutch, Gujerat, Deccan. It is distributed to Afghanistan, Arabia, North Africa, Cape Verde Islands, and tropical Africa.

The plant has tonic properties. It is given as a cooling medicine in fever.

The mucilage is used in Sind for gonorrhoea.

The leaves are emollient. The Baluchis make a cooling drink out of them. In Jaisalmer and Jodhpur they are applied to wounds, and a decoction is said to be efficacious in cases of skin eruption.

The seeds in decoction, with milk and sugar, are given as a tonic.

*Arabic*: Ueki—; *Baluchistan*: Mandira, Munderi, Mundheri—; *English*: Shrubby Jute—; *Gujerati*: Bahuphali, Bethibahuphali, Chhikni, Chhunchh—; *Hindi*: Baphuli—; *Marathi*: Bahuphali—; *Punjab*: Babuna, Bahuphali, Bophalli, Kurana—; *Rajputana*: Hadekakheth—; *Sanskrit*: Bhedani, Chanchu, Katuka, Kshudra, Ksudrachanchu, Patupatrika, Shunakuchanchuka, Tvaka-sara—; *Sind*: Mudhiri, Munderi—; *Uriya*: Bojoromuli—.

4. **Corchorus fascicularis** Lam. occurs throughout the hotter parts of India. It is distributed to tropical Africa and Australia.

It is very mucilaginous and somewhat astringent, and is valued as a restorative.

In Bombay, a watery extract, mixed with sugar-candy, is taken as a nutritive tonic.

*Bengal*: Banpat, Bilnalita, Janglipat—; *Bombay*: Bhauphali, Hirankhori, Mothibahuphali—; *Gujerat*: Chhunchhadi, Ubhibahuphali—; *Hindi*: Banko-stoa, Janylipat, Khetapat—; *Marathi*: Hirankuri, Motibuhuphali—; *Poona*: Mayarmithi—; *Porebunder*: Chhunchhadi, Ubhibahuphali—; *Sanskrit*: Bhirupatrika, Chanchu, Chanchuputra, Chanchura, Chhunchhu, Chinchu, Diagh-patri, Kalabhi, Kshestrachhunchhu, Kshestrasambhava, Sushaka, Vijala—.

5. **Corchorus olitorius** Linn. is generally distributed by cultivation in all tropical countries. The chief seat of its Indian cultivation is near Kulna in the Burdwan district of Bengal.

The dried plant, roasted and powdered, is used in visceral obstruction. In South India it is used as a demulcent.

The leaves are demulcent, tonic and diuretic, useful in some cases of chronic cystitis, gonorrhoea and dysuria.

The leaves and tender shoots are eaten, and in the dried state, known as *nalita*; they are used in infusion by the natives as a domestic medicine, being tonic and slightly febrifuge, and hence used as a fever drink.

The dried leaves are sold in the market. A cold infusion is used as a bitter tonic, and is devoid of any stimulating property. It can be safely given to patients recovering from acute dysentery to restore the appetite, and improve the strength.

The seeds are purgative. In Egypt they are put into the eye to cause inflammation by way of malingering.

*Abeokuta*: Eyo—; *Arabic*: Melochia, Meloukhia, Meluhhiye, Molochia, Molukhyia, Muluhhiye—; *Awana*: Ademe—; *Bengal*: Banpat, Bhungipat, Phunjipat, Koshta, Lalitapat, Pat—; *Berar*: Chooich—; *Bombay*: Chhunchh, Motichhunchh, Tankla—; *Efik*: Etinyon—; *Egypt*: Melukhiye—; *Ekoi*: Etinyung—; *English*: Jew's Mallow, Jute, Long-fruited Jute—; *Ewe*: Sigli,

Singili, Singli—; *Fanti*: Otoro, Oturo—; *French*: Corète, Corette, Corette potagère, Guimaive pot-gère, Mélochie—; *Fulani*: Lolo, Lolo memel—; *Ga*: Otoro, Oturo—; *Gambia*: Alo—; *German*: Gemuese Corchorus—; *Greek*: Corchoros—; *Gujerati*: Chhunchho—; *Hausa*: Lalo, Malafiya, Marafiya, Tungurnuwa—; *Hindi*: Banpat, Koshta, Pata, Sanpat, Singinjanasha—; *Ho*: Hatempa—; *Ibo Owerri*: Ahu hara—; *Ijebu-Ode*: Ayo—; *Ilesha*: Yoyo—; *Iraq*: Malukhiyah—; *Kanuri*: Darraba, Gamgaino—; *Katsina*: Turgunuwa—; *Kissi*: Yo-ngengeyo—; *Konno*: Kokoe—; *Kratchi*: Aposse—; *Lagos*: Ewedū—; *Mandingo*: Kiringere—; *Marathi*: Chunch, Motichunch—; *Mende*: Gingere, Ngege, Ngegele, Yengei, Yeingei—; *Mundari*: Larita—; *Nimar*: Rajan—; *North-Western Provinces*: Banphal—; *Oloke Meji*: Eyo-ganbi—; *Porebunder*: Chhunchho, Chunchhdo, Motichunchh—; *Punjab*: Banpat, Banphal—; *Sadani*: Larita—; *Sanskrit*: Brihachanchu, Dirghapatri, Divyagandha, Kalasa, Mahachanchu, Nadika, Patta, Singgika, Sthulachanchu, Suchanchuka, Vishari—; *Santali*: Birnarcha—; *Senoufo*: Sobo—; *Serere*: a Koud—; *Sherbro*: Krinkrin-de—; *Sierra Leone*: Bush Okra, Crincra, Crincrin, Ingle—; *Sind*: Banpat—; *Sinhalese*: Wanuk—; *Sobo*: Oyoyo—; *Susu*: Suri—; *Tamil*: Peratti, Perumpunnakhuppoendu, Punaku—; *Telugu*: Parinta, Parintakura—; *Timne*: Kenkerin, Kirinkirin—; *Umu Ahia*: Agheregha, Aheheara, Ahihira—; *Uriya*: Jhoto, Joto, Kaunria—; *Wolf*: Mbali—; *Yemen*: Melochia—; *Yoruba*: Ewedū-ga-nbe, Eyo, Eyo-ga-nbe, Oyo—.

6. **Corchorus trilocularis** Linn. is found in Bihar, the Deccan and Carnatic of the Madras and Bombay Presidencies, Khandesh, Gujerat, Cutch, Sind, Baluchistan; whence it extends to Afgani-stan, Arabia, tropical and southern Africa.

The plant, macerated for a few hours in water, yields a mucilage, prescribed as a demulcent.

The seeds are bitter and administered in doses of about 80 grains in fever and obstruction of the abdominal viscera.

*Arabic*: Melochia, Molukhiya—; *Arago*: Emakikoho—; *Bombay*: Kaduchhunchh, Kuruchuntz—; *Canarese*: Tanolassir—; *Egypt*: Melukhiye—; *Fulani*: Lalo—; *Gujerati*: Kadvi-chhunchhdi—; *Hausa*: Lalo, Turgunuwa—; *Hindi*: Kadukosta, Kadapat—; *Malay*: Ramput baya roaza—; *Marathi*: Kaduchunch—; *Nasirabad*: Datrab—; *Porebunder*: Lambichhunchh—; *Rajputana*: Hardikeket, Kaglekitamaku, Karak—; *Sanskrit*: Dirghachanchu, Kaunti, Nadika—; *Sinhalese*: Jahedara, Wanuk—; *Songhai*: al Mulugua—; *Tamil*: Peratti, Punnakkuppoendu, Talakkaippoendu—.

## ELAEOCARPUS

The genus numbers 90 tropical species, most abundant in the hotter parts of India and the Indian Archipelago; a few are found in some of the South Sea Islands, New Zealand, and Australia.

*E. madepolatus* Pierre is used medicinally in Cambodia, *E. photiniaefolia* Hook. and Arn. in Indo-China.

A. Anthers not terminated by an awn.

I. Drupe 5-celled ... .. *E. Ganitrus*.

II. Drupe 1-3-celled.

a. Anthers bearded. Filaments short, straight ... *E. serratus*.

b. Anthers rarely bearded. Filaments long, twice bent ... .. *E. oblongus*.

B. Anthers terminated by a long awn.

Leaves obovate. Stone much tubercled ... .. *E. tuberculatus*.

1. **Elaeocarpus Ganitrus** Roxb. is found in the Western Ghats and the Konkan of the Bombay Presidency, Nepal, Bengal, Burma, Siam, the Malay Peninsula and Archipelago.



The fruit is used by Hindu practioners in diseases of the head and epileptic fits.

*Bengal:* Rudrakya—; *Canarese:* Rudraksha—; *English:* Utrasum Bead Tree—; *Hindi:* Rudrak—; *Malayalam:* Rudraksham—; *Marathi:* Rudraksh—; *Sanskrit:* Amara, Bhutanashana, Harksha, Nilakanthaksha, Pavana, Pushpa-  
chanamara, Rudraksha, Sharvaksha, Shivaksha, Shivapriya, Trinameru—; *Tamil:* Akkam, Irattaiyuruttirasham, Kaurichangamani, Uruttiradcham, Uruttirakkam—; *Telugu:* Rudrachallu—; *Tulu:* Rudraksha—; *Uriya:* Rudrakhyo—.

2. **Elaeocarpus oblongus** Gært. occurs in the Western Peninsula, and in Malaya.

The fruit is used as an emetic.

*Badaga:* Bikki—; *Canarese:* Bikki, Hanaltadi, Hanillatade, Hennalatade—; *Malayalam:* Kattakara, Malankara—; *Tamil:* Kattukkarai—; *Visayan:* Cabalte, Cabilte—.

3. **Elaeocarpus serratus** Linn. is found in the Western Peninsula, Ceylon, and Malaya.

The leaves are used in rheumatism, and as an antidote to poison.

The fruits are prescribed in dysentery and diarrhœa.

*Bengal:* Jalpai—; *Canarese:* Bigada, Guddarenje, Perinkara—; *English:* Wild Olive—; *Hindi:* Jalpi—; *Malayalam:* Avil, Karamavu, Nallakara, Perunkara, Valiyakara—; *Sanskrit:* Chiribilva—; *Sinhalese:* Weralu—; *Tamil:* Ulangarai, Uruttiracham—; *Tulu:* Rahubija—; *Uriya:* Jolopari—.

4. **Elaeocarpus tuberculatus** Roxb. is found in the Western Peninsula, and in Malaya.

A decoction of the bark is given in vomiting of blood, and in biliousness.

The nuts are used in rheumatism, typhoid fever, and epilepsy.

*Badaga:* Rudraksha—; *Canarese:* Bhutali, Dandele, Dandla, Rudrak, Rudraksha, Rudrakshi—; *Hindi:* Rudrak—; *Kadir:* Navati, Pagumbal, Pillahi, Pulandi—; *Malayalam:* Ammakaram, Kotuvasi, Maggara, Nakara, Navati, Pillahi, Pulanthi—; *Mysore:* Danala—; *Tamil:* Pagumbal, Rudraksham, Uruttracham—.

#### GREWIA

The genus numbers 150 species spread over Asia, Africa and Australia, mostly tropical.

Mucilaginous and demulcent, useful in the treatment of diarrhœa and dysentery.

The following are used medicinally in Indo China—*G. paniculata* Roxb.—; in the Philippine Islands—*G. paniculata* Roxb., *G. umbellata* Roxb.—; in Australia—*G. hirsuta* Vahl—; in Tropical Africa—*G. carpinifolia* Juss., *G. mollis* Juss., *G. populifolia* Vahl, *G. villosa* Willd.—; in South Africa—*G. occidentalis* Linn.—.

A. Inflorescence terminal and axillary (sometimes extra-axillary). Flowers in umbellate cymes

I. Scandent shrubs. Torus long. Drupes obscurely lobed, purple ... .. *G. umbellata*.

II. Shrubby. Torus short. Drupes yellowish, generally 2-lobed, lobes the size of a small pea, orange-red ... .. *G. populifolia*.

- B. Inflorescence leaf-opposed and axillary. Leaves glabrous or nearly so ... *G. tenax*.
- C. Inflorescence axillary (rarely extra-axillary).
- I. Leaves usually hoary, at least beneath.
- Leaves 5-6-nerved
1. Stipules leafy, auricled ... *G. tiliaefolia*.
2. Stipules linear-lanceolate ... *G. asiatica*.
- II. Leaves not hoary beneath, orbicular.
- Anthers glabrous
- a. Drupes with a crustaceous rind
1. Leaves 3-6 by 4 in. ... *G. sclerophylla*.
2. Leaves 3 by 1½ in.; petiole ¼ in. ... *G. carpinifolia*.
3. Leaves 1-3 in.; petiole ⅓-1 in. ... *G. villosa*.
- b. Drupes fleshy. Flowers polygamous.
- Branched shrub. Stamens more than 40 ... *G. hirsuta*.
- D. Inflorescence terminal, in paniced cymes.
- Flowers involucrate.
- I. Petals oblong, entire or shortly emarginate.
- Thrice shorter than sepals ... *G. Microcos*.
- II. Petals entire, much shorter than sepals ... *G. paniculata*.

1. **Grewia asiatica** Linn. is cultivated throughout India.

The fruit is a well-known Ayurveda medicine credited with astringent, cooling, and stomachic properties.

An infusion of the bark is used as a demulcent. The Santals use the root-bark for rheumatism.

The leaf is employed as an application to pustular eruptions, and the bud is also prescribed by native practitioners.

*Ajmere*: Dhamni—; *Arabic*: Phalasah—; *Bengal*: Phalsa, Shukri—; *Burma*: Pintayaw, Tagaw—; *Bombay*: Phalasi—; *Canarese*: Buttuyudippe, Jana, Tadasala—; *Central Provinces*: Dhamru, Dhamun—; *Deccan*: Phulsha, Pulsha—; *Gujerat*: Phalsa—; *Hindi*: Dhamin, Karra, Parusha, Phalsa, Pharvah, Pharsa, Phulsa, Shukri—; *Kohlu*: Pistawan—; *Kolami*: Gonyia, Singhindamin—; *Konkani*: Phalsi—; *Kotra*: Pharwan—; *Malayalam*: Chadicha—; *Marathi*: Phalsi—; *Nepal*: Sialposra—; *Newari*: Fussi—; *North-Western Provinces*: Dhaman, Phalsa, Pharsiya—; *Parbut*: Falsa, Fursu—; *Persian*: Falseh, Palasah—; *Punjab*: Phalsa, Phalso, Pharoah, Phalue—; *Pushtu*: Pastaoni, Shikarimaiwah—; *Sanskrit*: Alpasthi, Dhanvanchhada, Giripilu, Mriduphala, Nagadalapam, Nilacharma, Nilamandala, Parapara, Paravata, Parusha, Parushaka, Porusha, Purusha, Roshana—; *Santal*: Jangolat—; *Sind*: Phalsa, Phalso, Pharaoh, Pharoah—; *Sinhalese*: Dowaniya, Hindamaniya—; *Tamil*: Palisa, Tadachi, Unnu—; *Telugu*: Jana, Nallajana, Peddajana, Phutiki, Putiki—; *Urdu*: Phalasah—; *Uriya*: Pharosakoli—.

2. **Grewia carpinifolia** Juss. is found in the Western Peninsula and is distributed to Tropical Africa.

In West Tropical Africa the plant is used medicinally or to combine with other medicines. Women use it in washing the hair to remove or prevent lice, and put the roots in soup when approaching childbirth.

In East Tropical Africa the broth obtained by boiling the head of a kid in a decoction of the root is taken in cases of diuresis and polyuria.

*Ashanti*: Ntabanu—; *Ewe*: Gayalige, Tupoetupoe—; *Fanti*: Nkukumbe, Ntaanta—; *Ga*: Asegetete-ntaata, Asegremi-tsho—; *Gosha*: Donoi—; *Krobo*: Akpe-tsho—; *Somali*: Debi—; *Yoruba*: Itakun okere—.

3. **Grewia hirsuta** Vahl occurs in the sub-Himalayan tract up to 4,500 feet from the Indus eastwards, the Salt Range, Bihar, Orissa, Burma, the southern Provinces, and Ceylon. It is distributed to North Australia.

The fruit is employed as a medicine by the Santals, in diarrhoea and dysentery. The root pounded is also prescribed for the same diseases, and powdered in water is applied externally to hasten suppuration, and as a dressing for wounds. The paste dries and forms a hard coating, thus effectually excluding air from the raw surface.

This plant is used by the aborigines of North-Western Australia as a remedy for dysentery.

*Arabic*: Kamafetusa—; *Australia*: Plain Currant—; *Betul*: Kharota—; *Bombay*: Gowali, Gowli—; *Burma*: Kyettayaw—; *Canarese*: Chikkudippe, Jana, Udippe—; *Hasada*: Setalele—; *Hindi*: Gursukri, Kakarundah, Kukurbicha—; *Kharwar*: Gursukri—; *Kolami*: Setaandir, Setabeli, Setakata—; *Marathi*: Govli—; *Merwara*: Phrongli—; *Naguri*: Seta-bili, Seta-kata—; *Persian*: Karafasrumi—; *Porebunder*: Khoddhramani—; *Queensland*: Karoom, Kooline, Ouraie—; *Santal*: Setaandir, Setabeli, Setakata—; *Tamil*: Tavidu—; *Telugu*: Bidarachipuru, Budda, Chinnachipuru, Chipuru, Chittijana, Jibilike, Muvalchu, Tellajana—; *Urdu*: Kakarundehrumi—; *Uriya*: Kulo, Sonaranga—

4. **Grewia Microcos** Linn. occurs in Eastern Bengal, Assam, Burma, the Western Peninsula, Mysore, and Ceylon. It is distributed to Java and China.

The plant is much used medicinally; it is given for indigestion, eczema and itch, smallpox, typhoid fever, dysentery, syphilitic ulceration of the mouth.

*Bombay*: Ansale, Shiral—; *Burma*: Myaza—; *Canarese*: Abhhrangu, Biliyahhrangu, Majjigesoppu—; *Malayalam*: Kottakka—; *Sinhalese*: Keliya—; *Tamil*: Kadambu, Visalam—; *Tulu*: Abroni—

5. **Grewia paniculata** Roxb. is common in the Malay Peninsula and in Indo-China, in open country.

In the southern parts of Indo-China a decoction of the roots is given as a cure for cough.

*Indo-China*: Co ke, Poplear thom—; *Malay*: Chenderai hutan—; *Visayan*: Bangalad—.

6. **Grewia populifolia** Vahl extends from the arid tracts of the Punjab, Sind, Rajputana, and Western India, down to the Nilgiri Hills. It is distributed to Afghanistan, Arabia, tropical Africa, Mauritius.

A mucilage of the bark is used by the women of West Tropical Africa to cleanse the hair of vermin.

Somali women take a decoction of the roots to incite the foetus in the womb and thus ascertain that it is alive.

*Falor*: Sonne—; *Gosha*: Moris—; *Kohat*: Shikari mewa—; *Kolami*: Bursa—; *None*: Sonne—; *Punjab*: Ganger, Gangi, Kanger, Khircha, Inzarre—; *Pushtu*: Khircha, Madzar—; *Rajputana*: Ganegam, Gangan, Gangerun—; *Serere*: Nghel, Nguel—; *Sind*: Gangi, Gango—; *Somali*: Morio—; *Telugu*: Gundukadira, Kadadari, Kaladi, Kattokolupu—; *Tuareg*: Tarkat—; *Tukolor*: Keli, Kelli—; *Wolof*: Kel—.

7. **Grewia sclerophylla** Roxb. occurs throughout the sub-Himalayan tract and outer hills of Kumaon, up to 3,500 feet, Sikkim, Assam, Chittagong, Ava.

The root is prescribed in coughs and irritable conditions of the intestines and bladder. The decoction is also used as an emollient enema.

*Bengal*: Phalsa—; *Burma*: Petshat—; *Canarese*: Darsuk, Kadukadele—; *Cutch*: Susaka—; *Dehra Dun*: Gurbheli—; *Gujerati*: Padekado—; *Haldwani*: Phalsa—; *Hindi*: Pharsia—; *Kumaon*: Pharsia—; *Marathi*: Khatkhati, Pandharidhaman—; *Mundari*: Gaphni—; *Tamil*: Kattukkadali, Punaippidukkan—; *Telugu*: Bankajana—; *Tharu*: Dapher—.

8. **Grewia tenax** Fiori is found in the Punjab, the desert of Western Rajputana, Sind, Baluchistan, Cutch, Southern Maratha Country, the Deccan and Carnatic of the Madras Presidency, and Ceylon. It is distributed to Afghanistan, Persia, Arabia, tropical Africa, and Mauritius. It is most probably identical with *G. populifolia* Vahl.

A Baluchi medicine for all sorts of diseases and very highly esteemed. The berries are given for colds.

In Jhalawan a decoction of the wood is given as a cure for coughs and pains in the side.

*Arabic*: Chodar, Moucken, Nabba—; *Baluchi*: Gwangir, Buzi putrunk—; *Brahui*: Gwangir—; *Jhalawan*: Gwangi, Kango—; *Kalat*: Rango—; *Mandi*: Putrunk—; *Rajputana*: Gangeran, Gangerun, Gangi, Gango, Kankeran—; *Sinhalese*: Katuperatti—; *Tamil*: Achu—; *Telugu*: Gundukadira, Kadadari, Kaladi, Kattekolupu—.

9. **Grewia tiliaefolia** Vahl occurs in the sub-Himalayan region from the Jumna to Nepal up to 4,000 feet, Central India, all the districts of the Madras Presidency, Bihar, Orissa, Burma, and Ceylon. It is distributed to East Tropical Africa.

In the Konkan the bark, after removal of the tuber, is rubbed down with water, and the thick mucilage strained from it and given in 5-tola doses, with 2 tolas of the flour of *Panicum miliaceum* (warri) as a remedy for dysentery.

The bark is also employed externally to remove the irritation from cow-itch.

The wood reduced to a powder acts as an emetic, and is employed as an antidote to opium poisoning.

*Bengal*: Dhamani, Pharsa—; *Bhil*: Dhamnak—; *Bombay*: Damana, Karakana—; *Canarese*: Batale, Butale, Dadsal, Jana, Tadagana, Tadasali, Tadasalu, Thadasal, Thadsal—; *Central Provinces*: Damun, Dhaman, Dhamni—; *Ceylon*: Chadachi—; *English*: Dhaman—; *Gond*: Ainlubaranda, Kasul, Khesla—; *Gujerat*: Dalmon, Dhamana—; *Hindi*: Dhaman, Dhamani, Dhaman, Pharsa—; *Kadri*: Chatachi, Una—; *Kharwar*: Dhaman—; *Ahond*: Kahal, Karkana—; *Kolami*: Ahsing, Dhamin, Gonyer—; *Konkani*: Butale, Dadsale, Damon—; *Kumaon*: Pharsia—; *Kurku*: Dhamni—; *Malayalam*: Satchi, Una—; *Marathi*: Daman, Damni, Dhaman, Karavani, Karakarani—; *Matheran*: Dhaman—; *Mundari*: Asin, Asindaru, Bengadaru—; *Mayurbhanj*: Kultho—; *Porebunder*: Dhaman, Dharman—; *Sanskrit*: Dhamsi, Dhanuvriksha, Dharmana, Dharwana, Manabala, Pichhilaka, Pichhilatvaka, Raktakusuma, Rujasaha, Ruksha, Swaduphala—; *Santali*: Janoolat, Olat—; *Saora*: Inuputada—; *Sinhalese*: Daminiya, Daminne—; *Tamil*: Sadachi, Tada, Tarra, Una, Unnu—; *Telugu*: Charachi, Ettatada, Jana, Nulijana, Tada, Tadajana, Udupai—; *Tulu*: Kanapadi—; *Uriya*: Bhangia, Dhaman, Dhamono, Dhamuro—.



10. **Grewia umbellata** Roxb. is found in the Malay Peninsula, Siam, and Borneo.

The leaves are applied to cuts and wounds.

Malay: Akar chenderai, Akar kapialu, Akar sekapu, Akar sempelas lida kuching—; Philippines: Danloy—.

11. **Grewia villosa** Willd. occurs in the Trans-Indus, the Punjab, Rajputana, Sind, Cutch, Kathiawar, the Deccan and Carnatic of the Madras Presidency from the Kistna southwards. It is distributed to the Cape Verde Islands and tropical Africa.

The juice of the fresh bark is used with sugar and water for gonorrhœa and urinary complaints attended with irritability of the bladder.

The root is employed for diarrhœa in Chota Nagpur.

East of Chad, in tropical Africa, the root is an ingredient in native prescriptions for syphilis and smallpox.

The roots macerated and triturated with milk are a Somali cure for belly ache in babies; the adults apply a poultice to the abdomen, the roots are ground with as little water as possible.

Ajmere: Dhohan—; Baluchi: Pachini putrunk—; Canarese: Buttigaragale, Garakele, Sannudippe—; Cutch: Luskano—; Ewe: Adzadze—; Falor: Lekit—; Gujerati: Padekhado, Parekhado—; Hausa: Gwiwar rak 'umi—; Kamba: Mugu—; Kolami: Gaphni—; Mangu: Yumbu—; Marathi: Kharmati—; Merwara: Dhokelan—; None: Ngomen—; Punjab: Jalidar, Kaskusri, Thamer—; Pushtu: Inzarra, Pastuwanne—; Rajputana: Lonkas—; Santali: Tarsekolap—; Tamil: Kullai—; Telugu: Benta, Chenula—; Tigre: Hafule, Khafule—; Wolof: Horom sap—.

### TRIUMFETTA

The genus consists of 75 tropical species.

All the species are mucilaginous, demulcent, bechic, and diuretic; but those more commonly used are *T. rhomboidea* Jacq. and *T. semitriloba* Linn. generally, and *T. Lappula* Linn. in Guiana.

Fruit the size of a small pea; spines hooked, glabrous or ciliated	...	...	...	...	...	<i>T. rhomboidea.</i>
Fruit the size of a large pea; spines bristly or shaggy	...	...	...	...	...	<i>T. semitriloba.</i>

1. **Triumfetta rhomboidea** Jacq. occurs in tropical and sub-tropical India, Ceylon, the Malay Peninsula and Archipelago, from which it extends to China. It is distributed to Africa and America.

The root is bitter and acrid, and used as a diuretic.

The bark and fresh leaves are given in diarrhœa and dysentery.

The leaves, flowers and fruits are mucilaginous and astringent. They are given in gonorrhœa. The fruit is believed to promote parturition.

Zulu women take a hot infusion of the root to facilitate childbirth or to hasten the inception of parturition when it is delayed.

In La Reunion and Mauritius the mucilaginous roots and flowers are used for their demulcent, bechic, and diuretic properties.

The pounded root is applied to sore eyes and to boils in Madagascar; the leaves and the stems bruised together are used for poulticing all sorts of tumours. In the district of Menabe the plant, associated with *Cynodon dactylon*, is applied to burns and sore eyes.

In Brazil a decoction of the herb or of the fruit is used as an injection in inveterate gonorrhœa.

In Northern Nigeria the leaves, along with natron and bran, are given to horses for internal troubles. Similarly in Sierra Leone the seeds are mixed with Guinea-corn and given to horses for worms, and constipation.

*Agolo*: Abali oicha—; *Aguku*: Abali ilenza—; *Akim*: Betekuo—; *Antsianaka*: Besofimbavy, Besofinantana—; *Bakwiri*: Toli—; *Bengal*: Bunkra—; *Betsileo*: Besofina, Kihankasina—; *Bombay*: Nichardi—; *Brazil*: Carapicho, Carapicho da Calçada—; *Ceylon*: Aaiyooli—; *English*: Paroquet Burr—; *Ewe*: Bobui—; *Goa*: Tupsado—; *Gujerati*: Jhipato—; *Hansot*: Bharyado—; *Hausa*: 'Danka 'dafi, Suren fadama—; *Hindi*: Banokra, Chikri, Chiriyari—; *Hova*: Tsindailay, Tsitiamoty—; *Ibo*: Udo—; *Ijebu*: Epaf—; *La Reunion*: Hérissou blanc—; *Madagascar*: Besofina, Tsindailay—; *Marathi*: Jhinjhira, Jhinjudi, Kutrevandare, Nichardi—; *Matheran*: Nechara—; *Mauritius*: Herbe à panier, Hérissou blanc, Aadaye otti—; *Mende*: Chobwe, Chohobwe, Sogbe, Sogbei—; *Mundari*: Mindiat, Mindilata—; *Onitsha*: Udo mberi—; *Owerri*: Azuzo, Azu uzo, Oke udo, Udo mberi—; *Sakalave*: Kisalenjy, Tsirriy—; *Sanskrit*: Jhinjharita, Jhinjhrita, Jhinjhurdi, Jhirpata, Kantaphali—; *Sinhalese*: Epala—; *Tamil*: Ottuppullu, Puramutti—; *Telugu*: Chirusitrika, Tutturubenda—; *Timne*: Agbint-marabana, Egbuntemoer, Ekboentemoer—; *Twi*: Petekuku—; *Umu Ahia*: Ngbo—; *Uriya*: Bojoromuli, Jotojoti—; *Wolof*: Douperet—; *Yoruba*: Ako-bolobolo, Boko-pupa, Ilaa-omde—; *Zulu*: inDolaencane, inNorthwane—.

## 2. *Triumfetta semitriloba* Linn. is a tropical weed.

The leaves and fruit are mucilaginous and astringent.

The leaves are used in parts of Sierra Leone as a medicine for dysentery. In Cameroons a cold infusion of the leaves along with those of *Microdesmis puberula* is taken as a remedy for diarrhœa.

In Brazil a decoction of the herb or of the fruit is used as an injection in inveterate gonorrhœa.

*Aguku*: Agamevumawo—; *Ashanti*: Mfo—; *Bakwiri*: Toli—; *Brazil*: Carapicho, Carapicho da Calçada—; *Cameroons*: Okon, Okung—; *Duala*: Wonge—; *English*: Burweed—; *Ewe*: Bobui—; *Ibo*: Udo, Udo ji—; *Koranko*: Segbe—; *Limba*: Ubama-wuyeremi—; *Mende*: Bongewuli, Bonhui, Chobwe, Kpolohui, Kponhui, Pohui, Sogbe—; *Nzima*: Egurie—; *Onitsha*: Udo umuaka—; *Owerri*: Udo umuaka—; *Tagalog*: Calotang-bilok, Colotan—; *Timne*: E-boloni, Kaboloi, Ka-bononi, Raka—; *Visayan*: Daracot—; *Yoruba*: Esura—.